

State of Washington Radioactive Materials License



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As stated in the Nuclear Energy and Radiation Act, Revised Code of Washington 70.98, and the Radiation Protection Regulations, chapters 246-220 through 246-254 of the Washington Administrative Code, and in reliance on statements and commitments made by the licensee identified below, a license is issued authorizing the licensee to transfer, receive, possess, and use the radioactive material authorized below; and to use such radioactive material for the purpose(s) and at the place(s) authorized below. **This license is subject to all applicable rules and regulations issued by the State of Washington Department of Health.**

1. Licensee Name: <p style="text-align: center;">BROOKS APPLIED LABS, LLC</p>	3. License Number: <p style="text-align: center;">WN-L0240-1 RENEWAL Amendment No. 7</p> <p>Fee Code: 65</p>
2. Address: <p style="text-align: center;">18804 North Creek Parkway, Suite 100 Bothell, Washington 98011</p>	4. Expiration Date: <p style="text-align: center;">31 May 2026</p>
	5. Reference Number(s): <p style="text-align: center;">21-06-17.</p>

6. Radioactive Material (element and mass number).	7. Chemical and/or Physical Form.	8. Maximum quantity licensee may possess at any one time.
A. Radioactive material, atomic numbers 3 to 83, inclusive.	A. Liquid.	A. 3.7 megabecquerels (100 microcuries). Annual Possession Quantity not to exceed 3.7 megabecquerels (100 microcuries).*
B. Radioactive material, atomic numbers 3 to 83, inclusive.	B. Solid (Volatile and Non-volatile).	B. 0.37 megabecquerels (10 microcuries). Annual Possession Quantity not to exceed 0.37 megabecquerels (10 microcuries).*
C. Radioactive material, atomic numbers 84 to 98, inclusive.	C. Liquid.	C. 0.37 megabecquerels (10 microcuries). Annual Possession Quantity not to exceed 0.37 megabecquerels (10 microcuries).*

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| D. Radioactive material, atomic numbers 84 to 98, inclusive. | D. Solid (Volatile and Non-volatile). | D. 37 kilobecquerels (1 microcuries). | Annual Possession Quantity not to exceed 37 kilobecquerels (1 microcuries).* |
| E. Hydrogen-3 | E. Liquid. | E. 0.37 megabecquerels (10 microcuries). | Annual Possession Quantity not to exceed 0.37 megabecquerels (10 microcuries).* |

*** Annual Possession Quantity as defined in WAC 246-247-030(5).**

In addition to the restrictions in Item 6 and the possession limits in Item 8, the Licensee must further restrict their possession of licensed material to quantities below the limits specified in WAC 246-235-150, Schedule C which require consideration of the need for an emergency plan for responding to release of licensed material and to quantities below the minimum limit specified in WAC 246-235-075 for establishing decommissioning financial assurance.

CONDITIONS

9. Authorized Use.
 - A.-E. Radionuclides present incidental to chemical analysis of environmental samples.
10. Radioactive materials shall be stored and/or used at the licensee's address in Item 2.
11. The licensee must comply with the provisions of chapter 246-220 WAC, "Radiation Protection – General Provisions"; chapter 246-221 WAC, "Radiation Protection Standards"; chapter 246-222 WAC, "Radiation Protection – Worker Rights"; chapter 246-231 WAC, "Packaging and Transportation of Radioactive Material"; chapter 246-232 WAC, "Radioactive Material – Licensing Applicability"; chapter 246-235 WAC, "Radioactive Materials – Specific Licenses"; chapter 246-246 WAC, "Radioactive Criteria for License Termination"; chapter 246-247 WAC, "Radiation Protection - Air Emissions"; chapter 246-249 WAC, "Radioactive Waste – Use of the Commercial Disposal Site"; and chapter 246-254 WAC, "Radiation Protection — Fees".

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12. The Radiation Safety Officer for this program is Frank McFarland.

The Alternate Radiation Safety Officer for this program is Andy Nutzhorn.
13. Radioactive material, as described in Subitems below, shall be used by, or under the supervision of: Frank McFarland or Andy Nutzhorn.
14. All individuals working directly with radioactive materials or frequenting radioactive materials use areas shall receive training commensurate with their duties and responsibilities before beginning work or frequenting the area and at least annually thereafter. At a minimum training shall include: health protection considerations of individuals and potential offspring; procedures to minimize exposure; purposes and functions of protective devices; company radioactive material work procedures; applicable state regulations and the conditions of this license. Documentation indicating the individuals trained, subjects, and dates shall be maintained for inspection by the Department.
15. The radioactive materials authorized in this license shall not be used in animals, human beings or in products distributed to the public.
16. The licensee shall conduct a personnel monitoring and bioassay program in accordance with the criteria set forth in chapter 246-221 WAC.
17. The licensee shall maintain security and control of all radioactive materials received and possessed under the license in accordance with WAC 246-221-150. Materials shall be secured from or controlled in a manner which will prevent unauthorized access or removal from the place of storage.
18. The licensee shall maintain a documented running inventory of all unsealed radioactive materials received, possessed, used, transferred, and disposed of under the license. The records shall include radionuclides, activities, and disposition. Records shall be maintained for inspection by the Department.
19. Surveys for contamination shall be performed and recorded as appropriate for each project and job site.
20. Survey instruments shall be calibrated annually, but shall not exceed an interval of thirteen months, by persons specifically authorized by the Department, the U.S. Nuclear Regulatory Commission, or an Agreement State to perform such services.

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20. Cont'd. Liquid Scintillation Counters and other non-portable counting systems used for contamination wipe analysis shall have a quality assurance (QA) program to assure the reliability and accuracy of their Counter/Analyzer. This QA assessment shall be performed at least annually and shall be documented and maintained for inspection by the Department. The QA assessment or calibration should demonstrate that the instrument is capable of detecting removable contamination at or below the levels found in WAC 246-232-140 Schedule D. The Licensee shall maintain these records for three years as required in WAC 246-221-230.
21. All hoods used for storage and/or use of radioactive material must have a flow rate that meets the manufacturer's specifications, with the hood sash at the specified working height. Hood flow rates must be checked annually. A record of the annual flow-rate check must be maintained for inspection by the Department.
22. To assure the facility remains in compliance with chapter 246-247 WAC, "Radiation Protection - Air Emissions:"
- A. The potential-to-emit dose to the maximally exposed individual must be evaluated every calendar year using the actual Annual Possession Quantity (yearly throughput) for each radionuclide. A Radioactive Air Emissions License is required if the dose from the COMPLY Code or CAP88-PC Code is 0.1 mrem/yr or greater from all nuclides.
 - B. This COMPLY code or CAP88-PC code calculation may be performed annually and submitted to the Department by June 30 for the previous calendar year's emissions. If the parameters used for the code have not changed during the calendar year evaluation period the calculation is not required. If the calculation is not performed, the licensee is required to send the Department a statement that they have not exceeded the Annual Possession Quantity for each nuclide listed on the license. Both types of annual reports may be submitted by email to AIRRichland@doh.wa.gov, or by mail to 309 Bradley Boulevard, Suite 201, Richland, Washington, 99352.
 - C. The Licensee must maintain these records for five (5) years as required in WAC 246-247-080(8).
 - D. The licensee must notify the Department if there is a potential or actual increase in air emissions or other modification as defined in WAC 246-247-030(16).
23. The Radiation Safety Officer must perform an annual review of the radiation safety program for adherence to the conditions of the license, Title 246 WAC and ALARA concepts. A record of this audit must be maintained for inspection by the Department.

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24. In the event the licensee chooses to terminate, move, or vacate, the authorized use location, the licensee shall follow the applicable requirements in WAC 246-221-270, WAC 246-232-060, chapter 246-246 WAC, and WAC 246-247-080.
25. The licensee's emergency procedures shall follow those outlined in the Washington State Radiation Emergency Handbook revised May 2014, or subsequent revisions, or other procedures specifically approved by License Condition.
26. In accordance with chapter 173-326 WAC and WAC 246-249-020 "Site Use Permits", each licensee shall possess a valid and unencumbered site use permit prior to the transfer of radioactive waste, directly to or through an authorized licensed broker, for disposal of such waste at any commercial disposal facility in the state of Washington. In addition, the licensee shall comply with the permit requirements of the Washington Department of Health.

The Licensee shall retain a valid and unencumbered site use permit until the disposal facility or broker provides documentation stating that the radioactive waste has been accepted by the disposal facility. The licensee shall retain the records of disposal for the life of the company and for Department inspection.

27. The licensee must respond in the manner, and within the period, specified to any and all Department correspondence necessary to keep the license and related information current.

Where the licensee has submitted proposed corrective action, such action must be fully implemented in a timely manner, unless the Department has subsequently modified the licensee's proposed corrective action.

28. Except as specifically provided by this license, the licensee must possess and use radioactive material described in Items 6, 7, and 8 of this license in accordance with statements, representations and procedures contained in the documents listed below. The Department's "Rules and Regulations for Radiation Protection" must govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.

A. Application and attachments dated 6 May 2021.

FOR THE STATE OF WASHINGTON DEPARTMENT OF HEALTH

Date: 23 June 2021

By: 

Raj K Maharjan, MS

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